

1. A nucleic acid probe for measuring human gene expression, comprising:

wherein said probe is a single exon probe that hybridizes under high stringency conditions to a nucleic acid molecule expressed in human cells or tissues.

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 4, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

3. A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 5, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human heart.

4. A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 6, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human liver.

5. A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 7, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human fetal liver.

6. A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 8, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

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7. A single exon nucleic acid probe according to claim 1, wherein:

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human lung.

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 10, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

9. A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 11, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

[illegible]

rein said probe hybridizes to a nucleic acid from 100 cells.

The single exon nucleotide sequence set forth in Table 1, wherein:

a) said fragment includes said SEQ ID NO: 1.

rein said probe hybridizes to a nucleic acid from 100 cells.

a single exon nuclear DNA fragment, wherein:

a) the nucleotide sequence of said fragment is set forth in Table 1;

b) the fragment is a portion of said SEQ ID NO: 1.

[illegible][illegible]

rein said probe hybridizes to a nucleic acid from 100 cells.

a single exon nuclear DNA fragment, wherein:

a) the nucleotide sequence of said fragment is set forth in Table 1; and

b) the fragment is a portion of said SEQ ID NO: 1.

rein said probe hybridizes to a nucleic acid from 100 cells.

a single exon nuclear DNA fragment, wherein:

a) the nucleotide sequence of said fragment is set forth in Table I;

b) the fragment is a portion of said SEQ ID NO: 1.

[illegible]

13. The single exon nucleic acid probe of claim 1, wherein said fragment includes at least 25 contiguous nucleotides of said SEQ ID NO: or the complement thereof.

14. The single exon nucleic acid probe of claim 1, wherein said fragment includes at least 50 contiguous nucleotides of said SEQ ID NO: or the complement thereof.

15. The single exon nucleic acid probe of claim 1, wherein said probe further comprises, contiguous to a first end of said fragment, a first intronic and/or intergenic sequence that is identically contiguous to said fragment in the human genome.

16. The single exon nucleic acid probe of claim 15, wherein said probe further comprises, contiguous to a second end of said fragment, a second intronic and/or intergenic sequence that is identically contiguous to said fragment in the human genome.

17. The single exon nucleic acid probe of claim 16, wherein said probe comprises a nucleotide sequence selected from any one of SEQ ID NOs: 1 - 16,834, or the complement thereof.

18. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 4, or the complement thereof,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human brain.

19. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 5, or the complement thereof,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human heart.

20. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 6, or the complement thereof,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human liver.

21. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 7, or the complement thereof,

22. The single exon nucleic acid probe of claim 17, wherein:

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human placenta.

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human lung.

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 10, or the complement thereof,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human bone marrow.

25. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 11, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in HeLa cells.

26. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 12, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in BT 474 cells.

27. The single exon nucleic acid probe of claim 17, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 13, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in HBL 100 cells.

29. The single exon nucleic acid probe of claim 1, wherein said probe is no more than 5 kb in length.

31. The single exon nucleic acid probe of claim 1, wherein said probe lacks homopolymeric stretches of A or T.

a nucleotide sequence that encodes, or the complement of which encodes, at least 8 amino acids of any one of SEQ ID NOS:33,300 - 49,117,

33. A spatially-addressable set of single exon nucleic acid probes for measuring human gene expression, comprising:

a plurality of single exon nucleic acid probes according to claim 1,

wherein each of said plurality of probes is separately and addressably isolatable or amplifiable from said plurality.

34. The spatially-addressable set of single exon nucleic acid probes of claim 33, wherein each of said plurality of probes is amplifiable using at least one common primer.

35. The spatially-addressable set of single exon nucleic acid probes of claim 33, wherein said set comprises between 50 - 20,000 single exon nucleic acid probes.

36. The spatially-addressable set of single exon nucleic acid probes of claim 33, wherein the average length of the single exon nucleic acid probes is between 50 bp and 750 bp.

37. The spatially-addressable set of single exon nucleic acid probes of claim 33, wherein at least 50% of said single exon nucleic acid probes lack prokaryotic and bacteriophage vector sequence.

38. The spatially-addressable set of single exon nucleic acid probes of claim 33, wherein at least 50% of said single exon nucleic acid probes lack homopolymeric stretches of A or T.

49. An ORF-encoded peptide, comprising: at least 8 contiguous amino acids of any one of SEQ ID NOs:33,300 - 49,117 or at least 8 contiguous amino

acids of any one of SEQ ID NOs:33,300 - 49,117 with conservative amino acid substitutions.

50. The ORF-encoded peptide of claim 49, wherein said peptide comprises at least 15 contiguous amino acids of any one of SEQ ID NOs:33,300 - 49,117 or at least 15 contiguous amino acids of any one of SEQ ID NOs:33,300 - 49,117 with conservative amino acid substitutions.

51. An isolated antibody, wherein said antibody binds specifically to a peptide according to claim 49.

52. A method of selling and/or licensing single exon probes to a customer desiring to measure gene expression, comprising:

making available for computerized query a database having a plurality of records, each record corresponding to a single exon probe according to claim 1,

wherein said database responds to a customer query by returning to the customer at least one record, or an identifier of said record, that satisfies the customer query criteria, the probes to which said records correspond being available for sale and/or licensing.

53. A method of selling and/or licensing single-exon microarrays to a customer desiring to measure gene expression, comprising:

wherein said database responds to a customer query by returning to the customer at least one record, or an identifier of said record, that satisfies the customer query criteria, the microarrays to which said records correspond being available for sale and/or licensing.

making available for computerized query a database having a plurality of records, each record including data on the expression of a single exon probe according to claim 1,

wherein said database responds to a query by a customer having a subscription, but not to a query by a customer lacking such subscription, by returning at least one record, or identifier of said at least one record, that satisfies the customer query criteria.

55. A computer readable storage medium storing instructions that, when executed by a computer, causes the computer to perform the method of any one of claims 52 to 55.

56. A computer system, comprising a processor programmed to perform the method of any one of claims 52 to 55.

58. A method of financing a company that makes and sells single exon probes, single exon microarrays, or expression data obtained therefrom, comprising:

selling stock in said company.

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